

COURSE LAYOUT

1. GENERAL

SCHOOL	ENVIRONMENT AND AGRICULTURAL ENGINEERING		
DEPARTMENT	NATURAL RESOURCES DEVELOPMENT AND AGRICULTURAL ENGINEERING		
STUDY LEVEL	<i>Undergraduate</i>		
COURSE CODE	218	SEMESTER	9 th
COURSE TITLE	PRECISION AGRICULTURE TECHNOLOGIES		
INDEPENDENT TEACHING ACTIVITIES		WEEKLY TEACHING HOURS	ECTS
Theory: Lectures,		3	3
Laboratory and practice		2	2
<i>Total</i>			
COURSE TYPE	Scientific Area		
PREREQUISITES	AGRICULTURAL MACHINERY		
LANGUAGE:	Greek		
IS THE COURSE OFFERED For ERASMUS STUDENTS?	YES (ENGLISH with individual lectures and assignments)		
COURSE WEB PAGE			

2. LEARNING OUTCOMES

Learning Outcomes
Specialised knowledge in the application of precision agriculture methods and technologies. The student will be able to understand spatial and temporal variability in farms and decide on the choice of appropriate methods and technologies for their management. They will become familiar with the equipment for both measuring variability and applying variable rates. Finally, they will understand and estimate the cost-effectiveness and environmental assessment of precision agriculture both internationally and in Greece.
General Competenses
-Search, analysis and synthesis of data and information, using the necessary technologies -Teamwork -Decision making -Promoting free, creative and inductive thinking

3. COURSE CONTENT

<ul style="list-style-type: none"> - Principles and methods of precision agriculture management - Crop trait mapping methods and applications - Global Navigation Satellite Systems (GNSS) and accuracy - Crop yield mapping sensors - Sensors for measuring soil and crop parameters - Remote sensing applications to measure variability for agricultural applications - Precision agriculture data analysis - Application of variable input rates, crop yield diversification - Methods of recording yield in tree crops, vineyards and vegetables. - Systems evaluation - Economics - Self-propelled vehicles as sensor carriers for measuring variability in the field - Applications of precision agriculture in Greece - Evaluation - perspectives
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4. TEACHING and LEARNING METHODS - Evaluation

TEACHING METHOD	(face-to-face)	
USE OF INFORMATICS and COMMUNICATION TECHNOLOGIES	Use of Information and Communication Technologies in teaching, and in the communication with students.	
TEACHING ORGANISATION	Activity	Work Load
	Lectures	75
	Laboratory work+ practice	50
	Total contact hours and training (About 25 hours of study per ECTS)	125
STUDENTS EVALUATION	<p><u>I. Theory</u> Team written assignment and presentation</p> <p><u>II. Laboratory</u> Written assignment concerning the processing of existing data from a precision agriculture application.</p>	

5. SUGGESTED BIBLIOGRAPHY

Φουντάς, Σ., Γέμτος, Θ., 2016. ΓΕΩΡΓΙΑ ΑΚΡΙΒΕΙΑΣ. [Online book.] Αθήνα: Σύνδεσμος Ελληνικών Ακαδημαϊκών Βιβλιοθηκών. ISBN: 978-960-603-135-9.